

Fig 1a.

Principal Design

Representing X.500 in a RDBMS

- data extensibility and complexity
- object orientated and hierarchical

emp#	name	age	salary
------	------	-----	--------

↓
Relational

type	syntax	value
------	--------	-------

↓
X.500

PROPERTY

object name	parent name	type	syntax	value
----------------	----------------	------	--------	-------

functional decomposition →

Conceptual Design

Implementing X.500 in a RDBMS

- attributes and values
- hierarchy and names
- aliases
- data tolerance

HIERARCHY

EID	Parent	Alias	Name
-----	--------	-------	------

↓

Parent	Path
--------	------

↓

Alias	A-EID
-------	-------

↓

Name Norm	Name Raw
-----------	----------

OBJECT

EID	AID	VID	Disting	value
-----	-----	-----	---------	-------

↓

Name Norm	Name Raw
-----------	----------

ATTRIBUTE

EID	Type	Syntax	Object ID
-----	------	--------	-----------

service decomposition →

2/5
Fig 1b.

Logical Design

Performance Enhancements for RDBMS

- indexing option
- I/O considerations
- management

DIT

EID	PARENT	ALIAS	RDN
-----	--------	-------	-----

TREE

EID	PATH
-----	------

ALIAS

EID	A-EID
-----	-------

NAME

EID	RAW
-----	-----

SEARCH

EID	AID	VID	DISTING	NORM
-----	-----	-----	---------	------

ENTRY

EID	AID	VID	RAW
-----	-----	-----	-----

SUBSEARCH

EID	AID	VID	CID	DISTING	NORM
-----	-----	-----	-----	---------	------

ATTR

EID	SYX	DESC	OBJECTED
-----	-----	------	----------

Physical Design

Realising X.500 in a RDBMS

- efficiency
- portability
- functional extensibility

DIT

EID	PARENT	RDNKEY	RDN	FLAGS
-----	--------	--------	-----	-------

TREE

EID	LEV1	LEV2	LEV3	LEV4	PATH	FLAGS
-----	------	------	------	------	------	-------

ALIAS

EID	A_EID	FLAGS
-----	-------	-------

NAME

EID	RAW	FLAGS
-----	-----	-------

INFO

MAXIED	FLAGS
--------	-------

SEARCH

EID	AID	VID	NORM KEY	NORM	FLAGS
-----	-----	-----	----------	------	-------

SUBSEARCH

EID	AID	VID	CID	CVID	NORM KEY	NORM	FLAGS
-----	-----	-----	-----	------	----------	------	-------

ENTRY

EID	AID	VID	RAW	FLAGS
-----	-----	-----	-----	-------

SENTRY

EID	AID	VID	VALUE	FLAGS
-----	-----	-----	-------	-------

BLOB

EID	AID	VID	VFRAG	RAW	FLAGS
-----	-----	-----	-------	-----	-------

ATTR

AID	SYX	DESC	OBJECT ID	FLAGS
-----	-----	------	-----------	-------

SUBATTR

CID	SYX	DESC	OBJECT ID	FLAGS
-----	-----	------	-----------	-------

OCLASS

OCID	DESC	OBJE	MUST	MAY	SUPER	FLAGS
		CTID	LIST	LIST	LIST	

physical decomposition →

109040-8662860

Fig 2.

BASE OBJECT
WHOLE TREE 11

ONE LEVEL 12

SUB TREE 13

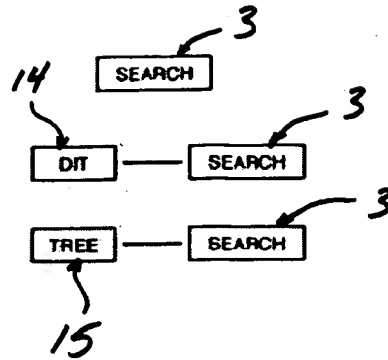


Fig 3.

BASE OBJECT
WHOLE TREE 11

ONE LEVEL 12

SUB TREE 13

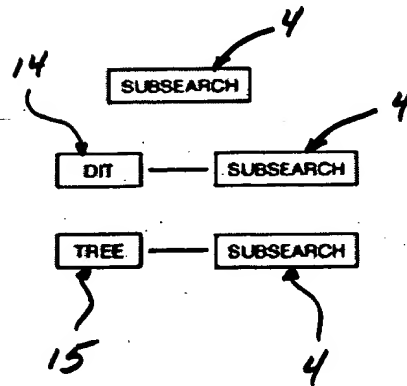


Fig 4. Certificate 20

Issuer	CA
Validity	1-2-2000
Serial	1234
Version	1
Subject	rick harvey

SEARCH

CA 1-2-2000 1234 1 RICK HARVEY

OR

1758723117

SUB SEARCH

CID	NORM
0	CA
1	20000201
2	1234
3	1
4	RICK HARVEY

SUBATTR

CID	SYX	DESC	OBJECT ID	FLAGS
0	1	ISSUER	2.5.4.98.1	0
1	11	VALIDITY	2.5.4.98.2	0
2	10	SERIAL	2.5.4.98.3	0
3	9	VERSION	2.5.4.98.4	0
4	1	SUBJECT	2.5.4.98.5	0

Fig 5.

